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ABSTRACT

A preschool director designed an outdoor playground for 115 infants, toddlers, and preschoolers attending an early childhood center operated by a graduate theological seminary. Based on a review of the relevant literature on different aspects of outdoor play, the design reflected a playground that: (1) integrated outdoor play area with indoor curriculum; (2) invited children to participate in spontaneous play with many choices of activities; (3) allowed children opportunities for creativity; (4) provided stimulation for children to explore and expand their experiences; and (5) contributed to the child's total development. Additionally, the design met long-term planning guidelines and cost limits and was approved for implementation over a period of 3 years at a cost of approximately 10,000 dollars per year. Using Lavell and Harmes' (1985) "Playground Improvement Rating Scale (PIRS)," the design was evaluated in terms of activities and equipment, safety and health, organization of the play area, variety of play surface, and surrounding environment. Evaluation results indicated that the playground design met 95 percent of the criteria in the measured areas. The report of action taken during the practicum discusses steps taken to attain objectives, difficulties encountered, and steps taken for problem solution. Over 40 references are cited and related materials are appended, including a map of the playground design and instruments, especially the PIRS. (RH)

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Center for the
Advancement of Education
Ed.D. Program

Improving Learning Environment for Infant/Toddler and Preschool Children Through Planning a Developmentally Oriented Playground

by

Ruth L. Stewart

Cluster XXIV

PS 018610

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NOVA UNIVERSITY

MAY 1 8 1989

Improving Learning Environment for Infant/Toddler and Preschool Children Through Planning a Developmentally Oriented PLayground

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Ruth L. Stewart

Cluster XXIV

A Practicum I Report Presented to the Ed.D. Program
in Early and Middle Childhood
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

NOVA UNIVERSITY

1989

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PRACTICUM APPROVAL SHEET

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This practicum report was submitted by Ruth L. Stewart under the direction of the advisor listed below. It was submitted to the Ed.D. Program in Early and Middle Childhood and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova University.

Approved:

5-6-89
Date of Final Approval of Report

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ABSTRACT

Improving Learning Environment for Infant/Toddler and Preschool Children Through Planning a Developmentally Oriented Playground. Stewart, Ruth L., 1989: Practicum Report, Nova University Ed.D Program in Early and Middle Childhood.
Descriptors: Infant/Toddler/Preschool Children/Safety/ Playgrounds/Playground Planning/Playground Design/ Day Care Centers/Child Development Centers/Developmental Stages

This practicum addressed the problem that there was no developmentally appropriate outdoor playground for infant/toddler and preschool age children who were cared for in the child development center program. This resulted in the children having no safe and developmentally oriented area to participate in outdoor play activities. The literature review addressed values of play, safety, design, and the developmental emphasis in planning for outdoor play.

The writer's goal was to develop a playground design for a developmentally and safety oriented playground for infant/toddler and preschool age children, with the play area adjoining the child development center building. The design: (1) integrated the outdoor play area with the indoor curriculum; (2) invited children to participate in spontaneous play with many choices of activities; (3) allowed children opportunities for creativity; (4) provided stimulation for children to explore and expand their experiences; and (5) contributed to the child's total development. In addressing the goal, the writer implemented a playground design based on developmental objectives of young children.

The playground design met the objectives of the practicum. The design was evaluated in five areas: (1) activities and equipment; (2) safety and health; (3) organization of play area; (4) variety of play surface; and (5) surrounding environment. The results indicated that the playground design met 95% of the criteria in the areas that were measured.

CHAPTER I

INTRODUCTION

Description of Community

This practicum project took place in a weekday early childhood center with a day care and preschool emphasis. The private, non-profit, church related center is operated by a graduate theological seminary sponsored by a major protestant denomination. The enrollment of the seminary is approximately 500, including students in the seminary extension locations as well as the main campus.

The early childhood program is located on the main campus of the seminary. It is housed in its own building. This building was constructed in 1980 to further expand the child development program.

Located in a midwestern city with a population of 500,000, the seminary campus consists of 200 acres in the suburban area of the city. The large campus, orginally a farm, with areas of woods and open space, projects a pastoral image in a busy city environment.

The philosophy of the early childhood program is to provide learning experiences which are designed to enrich the development of the intellectual, social,emotional, physical, and spiritual needs of the young child.

The curriculum provides a wide variety of learning experiences through play activities planned to aid the child in developing concepts, skills, understandings, attitudes, and positive self-image.

The program philosophy emphasizes that each child is a unique individual with specific abilities and differences created by God. The center's purpose is to provide a learning environment which enables children to develop a foundation for achieving their God-given potential.

A primary purpose of establishing this child development program was to provide a teaching-learning setting for preschool age children of students enrolled in the seminary program.

Financial philosophy dictates that the child development program income and expense balance. Parents pay a cost-based weekly rate for children to attend the program. No other monies are received. Seminary students receive a 30% reduction of the weekly rate; for example, the weekly rate for care for children under 2 years of age is $75.00 for the full day program, while seminary students are charged $52.50 for the weekly care.

The center program was limited to seminary students until the new child development building was constructed in 1980, when the program was also opened to community children on a space available basis. Priority continues

to be given to children of seminary students who comprise 25% of the enrollment.

The center program is conducted in a community which is made up of predominantly white, middle-class families. There is a range of socio-economic backgrounds with the majority of the parents engaged in professional occupations. Children of low-income families, who receive child care subsidy, are not enrolled in the program as the institution's philosophy regarding the separation of church and state does not permit receiving state or federal monies. This philosophy has an influence on the clientele served.

The child development program serves 115 children, ages 6 weeks through 5 years, who are enrolled in full or half day programs for 3 or 5 days a week.

The program staff consists of a director, assistant to the director, secretary, cook, custodian, 8 lead teachers, and 14 full and part time teacher assistants. The majority of the teaching staff are spouses of seminary students; two are enrolled in undergraduate degree programs. The director is the only staff person with a degree in early childhood education.

Writer's Work Setting and Role

The writer is the director and the administrator of the program. The assistant to the director and the

secretary aid the director in administrative functions. Personnel structure of the institution regulates that the writer relates to the Vice-President of Business in the administrative role.

Administrative responsibilities of the writer include: (1) program development; (2) curriculum development; (3) hiring, training, and supervision of the 25 child development program employees; (4) planning and administration of $300,000.00 program budget; (5) the process and collection of receipts to equal the budget; and (6) relating the early childhood program to the organizational structure of the institution.

Educational qualifications of the writer include a bachelor's degree in sociology, a master's degree in religious education, a graduate specialist degree in early childhood education, and current enrollment in a program leading to an Ed.D. degree in early and middle childhood.

The writer has held the present position of director for 14 years. Prior to 1974, the writer served in a church for two years as director of education; a position which included directing the weekday preschool program. Other vocational experiences have been serving as a preschool teacher, adjunct professor, workshop leader, and consultant in weekday early education programs.

CHAPTER II

STUDY OF THE PROBLEM

Problem Description

There was no outdoor play equipment near the child development center building. When the building was constructed in 1980, a fence was placed around a grassy area adjoining it to the building to provide a fenced area for outdoor play. No playground equipment was installed in the fenced play area.

Balls, hoops, and some portable equipment were moved from the building to the fenced play area. Quantity and variety of portable equipment were very limited and did not offer enough choices for the children. Moving equipment to the play area was not always successful as the teachers got tired moving the equipment and the children got bored with the available choices. The play situation as it existed encouraged running and aggressive behavior which often resulted in behavior problems produced by the environment. The lack of an appropriate playground limited outdoor play opportunity for the children and caused frustration to most of the teachers as only a few teachers had the initiative, energy, and creativity to use the environment in a positive manner.

Outdoor play equipment was available at another

location in the campus housing area. This play area was not readily accessible as it was about a block from the child development center building and children had to cross a campus street to reach the playground.

This existing playground did not have a fence surrounding it; as a fence was provided on only one side of the playground. The fence had been placed parallel between the street and the play area to prevent children running into the street. Teachers had to supervise children very closely to avoid any children leaving the play area.

The play area was very traditional in design with the equipment consisting of a slide, swings, climbing apparatus, and several spring animals. The equipment was not designed for use by preschool age children and was lacking in proper safety considerations and maintenance for any age child.

The play area was not routinely checked and maintained to remove broken glass and other hazardous materials often found on the playground. Neither was the equipment well maintained to prevent injury from broken and protruding parts, nor was cushioning provided under the swings and climbing apparatus. Consequently, there was no developmentally appropriate outdoor playground for the children in the child development center program.

The existing equipment did not provide appropriate and stimulating levels of difficulty for all ages of children, infants to five years. More options were needed for children to choose from to be constructively involved in the activities of the playground. Equipment was basically swings and climbing apparatus, which did not stimulate enough types of activity. There was no hard surface area to ride wheel toys; neither were creative materials available, for example; sand,water, carpentry, and paint. Playground usage was limited in hot weather because shade and drinking fountains were not available on the playground.

There was no extension of the indoor curriculum to the outdoor learning environment as the equipment and play facility was not available to make daily provisions for each type of activity: physical play, dramatic play, creative activity, construction, exploration and discovery. For example, the teacher should be able to set out accessories so they cue children to possibilities for use. This could be placing spades and hoes or a container of water in the sand area. The sand tools and containers add a new level of involvement; pouring, sifting, measuring, or perhaps, dramatic play. When water is added, there is new complexity. The sand can be molded; tunnels, buildings, and roads can be constructed; even dams and streams can be developed.

The extra equipment and an outdoor play area to

accommodate these materials was needed to extend the indoor curriculum, therefore enriching the learning potential of the outdoor play.

Children, teachers, and program curriculum were all affected by the lack of an appropriate outdoor play area adjoining the child development building. A playground component was needed to complete the overall physical facility and to expand the learning program. When the child development building was constructed the playground component was excluded because funds were unavailable. The advisory committee decided the playground would be added at a later undetermined date.

The problem was not solved as the money to develop the playground continued to be unavailable. Administrative officers in the institution were unable to make a commitment for funding to develop a playground design and the process of implementation for construction of a playground.

The problem that existed was that there was no developmentally appropriate outdoor playground for the children in the child development center program. A need existed for the infant/toddler and preschool age children to have a developmentally and safety oriented outdoor playground adjoining the child development center building.

Problem Documentation

A questionnaire was completed by 20 teachers in the child development program. The purpose was to determine if there was a need for infant/toddler and preschool age children to have a developmentally and safety oriented playground adjoining the child development building.

Part one of the questionnaire consisted of six questions relating to the playground situation. Participants rated their answers as: strongly agree, somewhat agree, somewhat disagree, strongly disagree, or no opinion.

Part two of the questionnaire consisted of fourteen questions related to the existing playground on the campus. Participants rated their answers as: the play area meets the goal very well, the play area needs to be improved to meet the goal, or the play area shows little or no evidence that it meets the goal.

The results of part one indicated:

1. Eighteen teachers agreed that there was no developmentally appropriate outdoor playground for children in the child development program. Five teachers disagreed and one teacher had no opinion.
2. Fifteen teachers agreed that there is no outdoor play equipment near the child develeopment center building. One teacher disagreed and four teachers had no opinion.

3. Eighteen teachers agreed that the outdoor play equipment which was available in another location was lacking in proper safety considerations and maintenance. Five teachers disagreed and five teachers had no opinion.
4. Twenty teachers agreed that there was limited outdoor play opportunity because of the lack of an appropriate playground.
5. Fifteen teachers agreed that there was no extension of the indoor curriculum to the outdoor learning environment. Four teachers disagreed and one teacher had no opinion.
6. Twenty teachers agreed that the development of a playground adjoining the child development center building would improve the overall physical facility and contribute to the quality of the total program.

Twenty teachers responded to each statement in part one.

The results of part two indicated:

1. Eleven teachers agreed there was no evidence that the play area meets the goal that the equipment provided appropriate and stimulating levels of difficulty for all age groups served (infants - 5 years). Seven teachers indicated the play area needed improving to meet the goal.

2. Nine teachers agreed there was no evidence that the play area meets the goal that it provided a variety of equipment to stimulate different types of physical activity. (Balls, balance beams, wheel toys, swings, climbing equipment, jump ropes, ladders, planks, etc.) Nine teachers indicated the play area needed improving to meet the goal.
3. Ten teachers agreed there was no evidence that the play area meets the goal that some of the equipment and materials invite cooperative play. (Outdoor blocks, rocking boat, dramatic play props, etc.) Eight teachers indicated the play area needed improving to meet the goal.
4. Twelve teachers agreed there was no evidence that the play area meets the goal that creative materials are readily available for children. (Clay, carpentry, paints, water and sand). Five teachers indicated the play area needed improving to meet the goal. One teacher indicated the play area meets the goal.
5. Thirteen teachers agreed there was no evidence that the play area meets the goal that the climbing equipment incorporated a variety of spatial relationships. (Through tunnels, up or down ramps, over or under platforms). Three teachers indicated

the play area needed improving to meet the goal. One teacher indicated the play area meets the goal.

6. Nine teachers agreed there was no evidence that the play area meets the goal that there are enough options for the children to choose from without unreasonable competition or waiting. Nine teachers indicated the play area needed improving to meet the goal.
7. Twelve teachers agreed there was no evidence that the play area meets the goal that cushioning is provided under swings and climbing apparatus. (Loose sand or tanbark at least 12 inches deep within a containing edgeboard, rubber padding). Five teachers indicated the play area needed improving to meet the goal. One teacher indicated the play area meets the goal.
8. Thirteen teachers agreed there was no evidence that the play area meets the goal that the equipment is well maintained. (No protruding nails, splinters, flaking paint, broken parts, frayed ropes). Four teachers indicated the play area needed improving to meet the goal. One teacher indicated the play area meets the goal.
9. Seven teachers agreed there was no evidence that the play area meets the goal that the play area was

routinely checked and maintained. (Trash picked up, grass mowed, good drainage). Eight teachers indicated the play area needed improving to meet the goal. Three teachers indicated the play area meets the goal.

10. Eighteen teachers agreed there was no evidence that the play area meets the goal that a drinking fountain is available on the playground.
11. Sixteen teachers agreed there was no evidence that the play area meets the goal that an adequate area of shade is provided in hot weather. Two teachers indicated the play area needed improving to meet the goal.
12. Eighteen teachers agreed there was no evidence that the play area meets the goal that a hard surface is available to ride wheel toys, play group games or dance.
13. Twelve teachers agreed there was no evidence that the play area meets the goal that sand, soil, and water are available for digging and mud play. Four teachers indicated the play area needed improving to meet the goal. Two teachers indicated the play area meets the goal.
14. Six teachers agreed there was no evidence that the play area meets the goal that most of the children

are constructively involved with the equipment and activities in the playground. Ten teachers indicated the play area needed improving to meet the goal. Two teachers indicated the play area meets the goal. Eighteen teachers responded to each statement in part two.

Causative Analysis

The causes of the problem were financial need, timing, and lack of a master design plan.

The child development building was constructed in 1980. A playground was not included in the building plan. The building advisory committee was aware of the need and the problem involved in omitting the playground. However, the playground was omited because the building cost was more than anticipated. Nc additional monies were allocated to this project, therefore, a decision was made to continue the building as planned and include only a fenced area for outdoor play. It as agreed a playground would be added later as money became available.

The financial philosophy of the institution as it relates to the child development program changed in 1983. Prior to 1983 the institution subsized the child care program which provides low cost child care for students enrolled in the seminary. The child development program

had been subsized up to $60,000.00 annually. In 1983, an administrative decision was made that no subsidy money would be available for the child development program. However, it would still be necessary for the program to provide child care for children of seminary students at thirty (30%) per cent below the actual cost of providing this care.

The child development program adopted financial policies which enabled it to become self-supporting. Through 1986, there continued to be no financial resources available to provide a playground. The administration of the institution was not ready to address the problem until the child development program was operating on a solid financial basis enabling the program to provide the monetary resources.

The timing to pursue the design and development of a playground was not positive until 1986. By that time the program had been self-supporting for several years and was stable in both enrollment and financial patterns. Administrative officers were now receptive and responsive to addressing the issue.

Prior to the present time, the lack of a master playground design had prohibited placing any permanent playground equipment in the fenced area. There were opportunies to purchase used jungle gyms, slides and

swings. This was declined in favor of waiting to develop a master plan to determine exactly what equipment was needed and where it would be placed.

A master plan was still needed which would provide for implementation of the playground in stages. This implementation was to continue over a period of years.

The Related Literature

In relating the problem to the literature, the writer found it covered several different learning disciplines which included education, administration, developmental psychology, architecture, landscape design and recreation.

There was common consensus of the value of innovative playgrounds for children. This consensus covered the areas of the value of play, current trends in design, safety considerations, and the developmental emphasis.

The Value of Play

Play is usually thought of as an action that is pleasurable. Many persons view a child's play as unimportant. They view it as undirected and without purpose. Evidence is increasing to substantiate the fact that play is integral to the development of basic motor skills. Miller (1984) has described the

contributions play makes to a child's development.

1. Basic Motor Skills - play contributes to physical growth,motor development,physiological functioning and physical fitness; enables children to: practice large muscle skills; gain perceptions of body position and movement in space; acquire coordination, agility, balance, strength,and endurance; and provides awareness of environment and of selves distinct from surroundings.
2. Mental Development - play provides opportunites for problem solving; enables children to: learn communication skills; develop concepts of shape, number, force, texture, frequency; learn to classify, order, and label; and provides background for future decisions and choices.
3. Social Development - play enables children to: grow from ego-centered to other-centered; learn roles of others, peer values, elders, and society; develop cooperation, and rights of self in relation to rights of others; and provides opportunities to learn compromises, teamwork, sharing, conflict resolution, and group decision making.
4. Emotional Maturity - play builds a concept of self and sense of body image; enables children to: learn self-confidence and independence; learn abilities and limitations, self-expression, and self-discipline; and provides an outlet for energy, anger, and frustration.

Further studies on the value of play are cited by Staniford (1981), Dickerson (1977), Noren-Bjorn (1982), Hill (1977), Mitchell and Anderson (1980), Miller (1989), and Guddemi (1987).

Staniford (1981) emphasizes that a study of children's play habits suggests that persons involved in planning play environments must incorporate all aspects of play in their design. The types of outdoor experiences that need to be provided include running, jumping, climbing, sliding, tunneling, and balancing. Play is integral to the development of basis motor skills.

Dickerson (1977) says children organize their neurological systems through movement and develop intellect through play. Perceptions develop into concepts as children experience their own bodies in relationship to objects, as they handle materials, and as they accompany action into language.

Noren-Bjorn (1982) based her information on the value of play from a study by the Swedish Council for Children's Play. It emphasizes the importance of being able to manipulate the playground for richer play. Hill (1977) also emphasizes ideas and activities which enhance the play and learning environment through the enjoyment of natural materials like, sand, water, and mud.

Mitchell and Anderson (1980) have examined the play spaces in Denmark, which have demonstrated an unusual priority for the importance of play. They have preserved time and space for the enjoyment of play. The study contains elements that make playgrounds work anywhere.

Miller (1989) stresses that a child is delighted when an adult takes time to play with them and how much more involved the play becomes. She contends that chidren will be drawn to what interests them and what will give them the most benefit on a particular day. It is when adults value these experiences and see their importance that adults add richness and imagination to the play of children.

Thomas (1983) cites increasing evidence that play is serious business. She says through play children learn about their lives and environment, they learn how to deal with other people, and they learn to use and control their bodies. When provided with creative outdoor play spaces that are specifically designed to foster growth and development in relative safety, young children are able to mature at their own pace with a background of secure, successful experiences on which to base future learning.

Guddemi (1987) points out that all children do not play the same nor do all children have time to play. The opportunity to play has lessened in preschool and early

childhood years due to parental pressures discouraging some types of play, societal trends of pushing children to grow up too fast, the influence of television, and "academic" constraints in the curriculum. Children need opportunities to engage in all types of play. The safe and developmentally sound outdoor environment is an excellent resource for play opportunities.

Current Trends in Design

The newest concepts in playground design are based on creatiivity and safety. Friedburg and Berkeley (1980) state certain elements of play found in traditonal playgrounds are included, but they are redesigned and adapted to create more rewarding and safer experiences. The goal is not just to give the child something to play with, but to make the playground experience meaningful. While traditional playground equipment is questionable, the activities for which it is intended are not. The swinging,sliding, and balancing they provide are natural loves of every child.

Segall (1987) states many of the global objectives of a preschool curriculum can be achieved on the playground. When children's active play is encouraged and redirected the development of social, physical, intellectual growth, enhancement of imagination and creativity can all take place. Frost and Wortham (1988) further expand the idea that

playgrounds should allow outdoor exploration of indoor curriculum areas. Most curriculum areas are readily amenable to this, particularly music, art, book activities, science and mathematics activities. The good contemporary playground contains nooks and crannies, amphitheater area, tables, benches, etc. Plants, animals, gardens, streams, and general nature areas further enhance opportunities for language, science, and mathematics.

Harris and Rogers (1988) contend that educators often overlook the importance of the second environment, the playground. They may view the time spent outside as a break from the serious educational business of the classroom, a time for children to "let off steam" and for adults to socialize or sit and relax. When educators begin to recognize the learning that can and should take place outdoors, they will find it easier to make a commitment to improve the outdoor play space and to find ways to work with children outdoors so that curriular objectives are met.

Beckwith (1979) discusses the new play spaces. These include a variety of structures, generally built of wood, that have decks of varying levels which promote the development of a limitless number of climbing and balancing skills. The rather nondescript design of these structures fosters imaginative play as well as group

interaction. These structures are designed to offer many play events with varying degrees of difficulty so that the children utilizing them can select the challenge they are most comfortable with and can progress at their own rate.

Brown (1984) says that recent studies suggest that traditional playgrounds are used less than contemporary playgrounds. Frost (1978) states the playgrounds are not utilized because they are developmentally inappropriate. They do not provide graduated levels of challenge, and once the equipment is mastered the child's interest in it diminishes rapidly. The play environments that Frost and Wortham (1988) envision are not mere collections of manufactured appliances, fantasy equipment or concrete sculptures. These reflect profit and physical fitness and are far too narrow to encompass the broad developmental needs of children. In the evolution of play spaces, there should be total environments that integrate nature(plants, animals,streams,hills), technology (imaginative, flexible, safe, challenging play structures), adult play leaders (sensitive, knowledgeable, supportive adults), and raw materials (wood, tools, water, dirt, sand, and scrap materials). Such playscapes must address the broad developmental needs (cognitive, social, motor, emotional) of children and bring practice abreast of knowledge about play and its effects on child development.

Frost and Wortham (1988) indicate that the playgrounds of the future must include adult play leaders who understand the dynamic potential of play in child development and know how to observe, how to intervene and how to determine which is needed.

Safety Considerations

Aronson (1988) states that safe,exciting, fun playground play occurs when the developmentally appropriate outdoor environment is combined with appropriate supervision to support child-initiated learning. Using their creativity, children can use a well-designed environment for thousands of safe activities. Color, texture, size, placement, and design of structures and backgrounds all affect how safe and effective a playground can be as a learning environment. Between half and two-thirds of all significant injuries in child care programs occur on the playground. The most frequent and most severe injuries are associated with falls onto hard surfaces. As a result of this, more attention is being focused on improving playground equipment and playing surfaces.

The Consumer Product Safety Commission (1985) presents some general guidelines to use to increase the safety of public playgrounds for children. They provide information about hazards associated with the use of public playground

equipment and suggestions for helping reduce the frequency and severity of injuries.

Dickerson (1977) states that on many playgrounds even the traditional pieces have been omitted or removed because of fear of accidents. When children are left to their own devices, running around, chasing each other, or wandering, accidents are more likely to occur. Research supports that asocial play and physical aggression increase when play possibilities are limited. Young children also spend much of their waking time with materials. It is a fundamental need of children to be busy and moving. Appropriate materials with which to interact are essential to them.

Hewes (1974) suggests that swinging and sliding are provided by traditional playgrounds in a way that is restrictive and unsafe. Equipment for these activities have been redesigned. The back and forth swing has been changed to a tire secured horizonally at three places and suspended from a central pivot. This allows it to move in any direction and accommodates several children. Sliding on tall, narrow sliding boards presents several problems. The new sliding equipment is low and wide allowing access from a platform rather than a line formed on high stairs. Children are able to slide in groups. These new designs allow children to experiment with

swinging and sliding in relative safety.

Traditional playgrounds often are not safe. Gordon (1981) cites falling as the most common injury. Most equipment found on traditional playgrounds allows opportunity for a child to fall from a height that can cause severe physical injury. The standard surface coverings for traditional playgrounds, asphalt and packed earth, are the source of the problem.

A major improvement is a change of playing surface. Shock absorbing materials are now being used under equipmant to prevent injuries from falls. Several resilient materials are commonly used, including sand, pea gravel, wood chips, shredded bark, shredded tires, and rubber matting.

Penman (1986) stresses that a playground can be designed so that all the benefits of exercise are obtainable and yet the child is never more than twenty four inches off the ground. Tire swings, small hills with slides built into them and tire bowls on turf slopes are just a few examples. Penman believes it is paramount when designing a new school playground that a competent and knowledgeable consultant about sport safety be retained. Good maintenance of the playground equipment needs to be conducted with a written checklist of what to look for. It is not impossible to design and maintain safe playgrounds.

Safety is of paramount importance; but if interest is built into the landscaping, it can be safer for children than sterile areas (Creaser, 1985). The safest looking sandbox can be dangerous with children crowding into it; but big,deep, sand areas, even when filled with pits and tunnels, can be big enough for children to be spread out and remain safe.

Frost (1985) addresses the area of site selection as it relates to safety and playability. He states the ideal site for a playground is adjacent to childrens' classrooms. This allows for direct access without crossing streets or parking lots. In this setting, teachers can integrate indoor/outdoor curricula by moving materials in and out of classrooms. Covered patio-like play areas linking the classroom and the play environment reduce excessive heat and sun exposure. The playground should have ample trees. The site should be large enough to accommodate all forms of play;social, exercise, dramatic, construction, organized games, and to provide ample space for movement between and within areas. A general rule of thumb is a minimum of eighty to one hundred square feet per child user (three to eight years of age) at a given time. Ample space reduces collision with other children and equipment.

Aronson (1988) adovates safe playgrounds are dependent on careful planning based on developmental skills of the

children for whom the area is designed. This means knowing children--their average size at a given age, how they behave, the rate at which they develop motor skills.

Esbenson (1982) cites research reveals that children ages one year to nine years are the most prone to playground related accidents. He concludes that we have much to do before we succeed in providing safe, stimulating, creative and appropriate playgrounds for children.

Developmental Emphasis

Most traditional playgrounds have been constructed to be pleasing to the adult eye, relatively inexpensive to build, and easy to maintain. Children quickly exhaust the possibilities provided by the traditional swings, slides, see-saws, merry-go-rounds, the modern molded and sculptured forms, and many of the "cute" designs adults dream up for children. Most of all these playgrounds have limited value for children's learning and growing as they have not been designed with the developmental needs of the children in mind.

A focus on development is most critical in planning play spaces for preshcool children The newest concepts in playground design are based on creativity, safety, and a child's developmental needs. The wide variety of experiences and possibilities offered by the new creative

playgrounds are fulfilling their developmental needs.

As a result of interest by educators and designers, playground design has become more creative. Lovell and Harmer (1985) say by applying what we know about social, cognitive, and motor development, and by using this rating scale to assess play areas, we can provide children with the best possible outdoor play environments.

In the past, the developmental needs of the child was primarly addressed in the classroom. The young child's outdoor life should be as rich in learning opportunities as his experiences in the indoor learning area. Dickerson (1977) believes the developmental emphasis is now being planned into outdoor play through the creative playground and are considered extensions of the indoor learning environment.

Gesell (1948) stated that children develop as a whole. The child comes by his mind as he comes by his body, through the organizing processes of growth. By exercising the body and mind together the preschool child builds a foundation for future learning.

All aspects of development must be considered in the design of any creative outdoor play space, including activities for cognitive as well as motor development. There is little argument that playgrounds created by adults and children working together are more stimulating

and developmentally appropriate than conventional playgrounds. This common consensus of the value of innovative playgrounds for children is shared by Frost and Klein (1983), Frost and Henniger (1979), Mitchell and Anderson (1980), Olds (1982), and Dickerson (1977).

Wardle (1988) says that as children engage in activities, whether it's digging in sand, walking on a balance beam, or climbing to the top of a "tower," they are developing their gross and fine motor skills. In order for a playground to support and stimulate this kind of physical play it needs to be set up appropriately. Compare the amount of time you spend arranging and designing the classroom environment and do the same with your playground. The playground needs to have equal consideration. Just as you have indoor areas for active play and quiet play, or activities that develop fine motor skills or creative expression; so should you have appropriate areas for your playground. Wardle urges everyone to think of ways you can plan,incorporate, and adapt areas and equipment to your own playground.

Esbenson (1986) and Thompkins (1981) both reflect that the now widely accepted view that play is a vital educational process has transformed our ideas about playground design. We now see the importance of meeting the social and cognitive needs of children as well as

their physical needs. This perspective takes education out of the classroom domain to include those many active learning experiences that children can be involved in outdoors. They also stress the gap between theory and practice is considerable.

Like all creative endeavors, innovative outdoor play areas are much more difficult to design and develop than the traditional playground concept as it involves much thinking, researching, time, and creative energy. Perhaps this is a major factor which influences many early childhood programs and other programs involving children's outdoor play areas to maintain a conventional approach rather than changing to or developing a more creative approach to the outdoor play environment.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATAION INSTRUMENTS

Statement of General Goals

The goal was to create a playground design so that the infant/toddler and preschool age children have a developmentally and safety oriented playground adjoining the child development center building.

Behavioral Expectations

The writer projected the following five objectives for this practicum.

1. A playground design so that there will be a playground which enables the integration of the outdoor play area into the total curriculum plan of the program.
2. A playground design so that there will be a playground which invites children to participate in spontaneous play with many choices of activities.
3. A playground design so that there will be a playground which allows children opportunities for creativity.
4. A playground design so that there will be a playground which will provide stimulation for the children to explore and expand experiences.

5. A playground design so that there will be a playground which will contribute to the child's total development. The playground will contribute to the development of motor skills, socialization,language, creativity, and enhance a child's sense of independence and positive self-image.

The standard of performance that was to be achieved was to be measured by the "Playground Improvement Rating Scale."

Evaluation Instrument

As a measurement instrument, the writer chose the "Playground Improvement Rating Scale." This measurement instrument was designed by Lavell and Harmes (1985). The writer used five of the six areas in the rating scale to measure the playground design. These areas were: (1) activities and equipment; (2) safety and health; (3) organization of play area; (4) variety of play surfaces; and (5) surrounding environment.

The rater reads the statements under each area

and responds in one of three ways: (1) if the outdoor play area meets the goal very well; (2) if the outdoor play area needs to be improved to meet the goal; and (3) the outdoor play area shows little or no evidence of meeting the goal. Examples are given with each item in the rating scale to help the rater measure the playground design with the item statement.

The writer determined the measurement of the playground design needed to meet ninety (90%) per cent of the criteria in the rating scale. The ninety (90%) per cent is based on the response of: the play area meets the goal very well.

To achieve maximum play value, the writer planned to evaluate the strengths and weaknesses of the playground design through the rating scale. The rating scale identified a variety of overlapping aspects of how all the goals and objectives were met in the design. After the evaluation would be completed and the results tabulated, this would determine if any changes were necessary in the playground design to meet the goals and objectives of the practicum.

The writer believes the playground design

incorporated broad objectives for children's development which were addressed through the measurement instrument. These objectives are (1) age appropriate equipment components which further large muscle development; (2) stages of complexity which challenge children physically and mentally; (3) areas which facilitate social skills; (4) a set up which enhances understanding of relationships; (5) equipment which promotes and encourages creative actions; (6) activities which advance knowledge about the material world; (7) dramatic play which allows role recreation; and (8) a location which enables the child to see outdoors as a place to enjoy many activities.

The rating scale was completed by twenty child development program teachers who also completed the questionnaire on the need for a playground, and five early childhood professionals who were not involved in this program or project.

The writer chose this rating scale as it assessed playgrounds from a broader perspective. It applied what researchers and educators knew about the value of outdoor play, about social, cognitive, and motor development. In using this measurement

instrument to access the play areas, it provided an evaluation tool to give the children a play environment which can provide the potential for maximum play value.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Solutions

Dickerson (1977) discussed constructing a playground which would provide a learning experience for children and also be a demonstration of an outdoor learning center that could be constructed by volunteers.

A changing play environment was an approach for creating a playground for preschool age children (Suter 1977). This solution placed an emphasis on providing materials, equipment, maintenance and allowing children to do the creating and design of the play that fits their desire.

How-to designs for constructing your own playground equipment was offered as an approach in playground planning by Hogan (1982) and Beckwith (1980).

Mason (1982) analyzed outdoor space as the context for play. He focused on planning and design considerations and also incorporates landscaping through the use of plants.

Phelps(1984) discussed using the playground for preschool children as an expansion of the teaching environment and in terms of their creative potential in providing opportunities for sensorimotor, symbolic, and construction play.

The developmental nature of play as it related to the design of outdoor spaces is explored by Frost and Klein (1983). They included the process for developing a playground and a rating scale for programs.

Olds (1982) examined the developmental purposes that environments for those under three years of age should be designed to accomplish and suggested forms that such play spaces might take. Developmental goals, environments that stimulate the senses, encourage movement and assist caregivers, and types of play are discussed. Play environments that allow each child to explore, experiment, make mistakes, and master new skills promote autonomy, initiative, and trust in self as well as others.

Frost and Henniger (1979) cited hazards of conventional playgrounds. An emphasis was placed on safety in reducing hazards; such as hard fall surfaces and poorly manufactured, installed,and maintained equipment.

Creaser (1985) discussed designing a playground which emphasized long-term planning for outdoor play, designing the playground as a landscape with an interplay of different qualities of experience, and thinking about the outdoors in the same terms as the indoor classroom in being a learning environment.

After reviewing the solutions in the references listed, most had elements which were helpful in providing ideas and resources for a solution in the writer's setting.

Hogan (1982) and Beckwith (1980) gave examples and diagrams of how-to construct equipment, these would not be practical in the writer's setting as the the human resources are not available to build the equipment. This also interplays with Dickerson (1977) in a playground developed by volunteers. Volunteers would not be available in the writer's setting. The solution of a more portable playground with an emphasis on providing materials and equipment with children doing the creating and designing (Suter, 1977) is used in a limited sense as a component within the total playground design in the writer's plan.

The solution strategies which fit the goals and objectives of the writer's setting focus on (Phelps, 1989) using the playground as an expansion of the teaching environment; the developmental nature of play as it related to the design of outdoor space (Frost & Klein, 1983), (Olds, 1982); safety considerations (Frost & Henniger, 1979); and landscaping (Mason, 1987).

Creaser (1985) offered the most complete concepts which fit the writer's setting and solution strategy. Insight was given to planning in stages and working with

various specialists. For example, using an architect, landscaper, horiculturalist, and carpenter in planning the playground. The concept of the playground as a landscape or playscape with the interplay of different qualities of experience fits the writer's outcome of the playground design. This concept included textures and surfaces, quiet and active, stable and changing. The writer's objective of thinking of the outdoors in the same terms as the indoor classroom, was further clarified by Creaser who treated the outdoors like a classroom, each with its own atmosphere, its characteristic tempo and its own potential learnings. Different learning settings which were basic to any playscape were sanded areas, rises, gullies, water courses, jungle area, climbing area, animal runs, amphitheater, shed and paths.

Description of Selected Solution

The solution the writer implemented included the following four parts.

1. An outdoor playground which would include these broad objectives.
   (1) Equipment which was age-appropriate for children's large muscle development. Activities include balancing, throwing, climbing, crawling, swinging, pushing, pulling, etc.

(2) A play environment with stages of complexity which challenge a child's physical and mental development.

(3) An outdoor area which facilitates social skills. The design encourages children to take turns, cooperate, share and plan together.

(4) A play area which enhances understanding of concepts of relationships such as in/out, up/down. over/under, high/low, heavy/light, hard/soft, and fast/slow.

(5) A place where creativity is encouraged outdoors through art, carpentry, music, movement and blockbuilding.

(6) A spot for children to advance their physical knowledge about the material world through changes in weather, planting and growing, relationship with nature, etc.

(7) An area where children grow in their understanding of the social world by recreating adult roles in dramatic play.

(8) A place where children see the outdoor environment as a comfortable setting in which to eat, paint, read, and engage in other activities.

2. The playground design included these components.

(1) Movement activities

Gross motor

Climbing
Rocking
Crawl through places
Jumping
Tires, hoops, spools; things that roll
Balance; planks, walking boards, level raisers
Wheel toys
Trike trails and surfaced areas
Balls

Fine motor

Tactile materials
- Water play
- Sand play
- Dirt play
- Painting/drawing/easel

(2) Rest and relaxation

Quiet time area
Shade
- For play
- For resting
- Picnic area

(3) Construction experience

Carpentry
Blocks

(4) Natural science

Garden area
Digging area
Woods area
Plants
Old trees - vertical for climbing
Animal area to attract birds/wildlife

(5) Amphitheater effect

Dramatic/imaginative play
Playhouse
Hill for rolling, etc.

(6) Other
Varied surfaces
Storage for outdoor equipment
Water available for drinking/activities
Play environment versatile and non-static
Safety-oriented
Easily supervised
Easily maintained
Natural materials to lend into environment
Meets state licensing requirements

3. The playground was designed to meet the needs of children by providing:

(1) A separate play area for infants/toddlers; zoned within the total playground area but separated from the older children for safety.

(2) Enough space to accommodate:

Ages 12-30 months - 35 children/8 adults

Ages 2½ - 5 years - 60 children/8 adults

4. The playground design met these planning and financial guidelines.

(1) A plan which can be implemented over a period of years; preferably three years.

(2) The total cost not to exceed $30,000.00.

(3) The amount of money available each budget year is approximately $10,000.00.

This solution meets the goal of creating a playground design so that infant/toddler and preschool age children have a developmentally and safety oriented playground adjoining the child development building.

This solution meets the objectives of design which were:

1. Enables the integration of the outdoor play area into the total curriculum plan of the program.
2. Invites the children to participate in spontaneous play with many choices of activities.
3. Allows children the opportunity for creativity.
4. Provides stimulation for the children to explore and expand experiences.
5. Contributes to the child's total development.

This solution was appropriate for the writer's setting as the financial resources were available to begin implementation of this plan. Administrative officers approved the playground planning and preliminary steps were completed. The timing was right to begin this plan.

Approval was received to work through the institutional office of development to secure funding resources. This solution met the institutional philosophy for planning and funding.

Report of Action Taken

The writer will discuss the steps taken to reach the solution and objectives listed on previous pages.

Step 1 - Study Report

The first step was gaining the necessary approval from administrative personnel of the institution to begin the playground planning. The writer developed a study report citing needs, goals, objectives and philosophy statement. The philosophy statement reflected program goals; and was supported by all persons involved in the project. The study report was submitted to administrative personnel who were decision-makers in the playground project. The study report became the guide as the writer worked through the planning process.

Teachers in the child development program answered a questionnaire relating to the present outdoor play situation. Ninety six (96%) per cent of the 372 responses indicated the present play area did not meet the goal of our philosophy statement.

The philosophy statement was: "It is the desire to integrate the outdoor play environment to the curriculum design of the program. We believe that outdoor play can contribute much to a a child's total development when it is planned as an integral component of the total learning environment. The development of motor skills is an important goal, however, outdoor play space can also contribute to a child's development of cognition, socialization, affect, language and creativity; and enhance a sense of independence and positive self-image. We will

provide an environment which invites children to participate in spontaneous play with many choices of activities which allow opportunities for creativity and provides stimulation to explore and expand experiences."

The study report addressed the play areas and what would be included. This related to experiences in movement (gross and fine motor), construction, natural science, dramatic, imaginative, rest and relaxation. A section of the report contained ideas the writer collected which illustrated the concepts to be developed in the play areas. The illustrations were viewed as concepts and not meant as definitive pieces of equipment to be purchased or constructed. Illustrations included: zoning the playground, climbing, rocking, swinging, balancing, crawl-throughs, movable objects, sand, water, dirt, gardening, science, painting, drawing, construction, dramatic, imaginative and infant/toddler components.

It was important to document state licensing regulations relating to outdoor play space in the study report and adhere to the regulations.

Step 2 - Implementation Plan

After securing institutional approval to implement the concepts in the study report, the writer developed a plan which included all aspects of implementation. The implementation was planned for three months but extended to nine months. The extended length of implementation

was due to unexpected difficulties in the institution which are discussed at the end of this chapter.

The steps included in the plan were:

1. Surveyed the land site
2. Developed the overall design of the outdoor play area
3. Developed play structure design
4. Evaluated playground and play structure design
5. Determined cost
6. Decided if fundraising process was needed
7. Established implementation plan
8. Evaluated playground through measurement instrument

The writer will share in more detail; the content, the process the writer used, and the difficulties encountered in each of these implementation steps. This will serve to impart to the reader sufficient knowledge to understand the implementation of this practicum, and/or to duplicate this solution in the reader's setting.

Surveyed the land used in the design. In the writer's setting this was necessary as the building sits on a level space but the land behind the building slopes sharply resulting in a hill. There were varying levels of elevations to consider in planning the positioning of equipment in this landscape. Another consideration was to determine where existing underground lines were located.

The writer discovered the land survey was a slow process. This was perhaps due to the fact that it was done by institutional personnel and did not receive high priority. Some planning aspects could not be completed until the survey data was available.

Develop the overall design of the outdoor play area. The writer recommended hiring a landscape architect as a consultant to provide professional expertise. It is the belief of the writer that this service is definitely worth the cost and will result in added benefits. Administrative personnel met with the consultant who gave overall suggestions for working with the design and terrain of the site. Administrative personnel vetoed hiring any landscape consultant. They decided the writer and themselves could put together an acceptable design for the master playground plan. The project proceeded on this basis with the writer developing the plan for evaluation and final approval by the administrative personnel.

Developed play structure design. The writer researched numerous playground equipment resources and recommended having the major play structures custom designed to meet the program's objectives. A major playground company was selected to design the specialized play structures. The writer worked with the equipment consultant in designing equipment to meet the objectives.

The writer took pictures of the site and submitted them, along with the land survey and study report, to the consultant. The consultant then visited the site and suggested types of play structures which could be implemented in stages and met the cost qualifications. A basic wood design type was chosen as the style to use in custom designing the play structure. The wood style blended well in the total landscape environment. The add-on components gave flexibility for future additions to the structure.

The consultant designed a miniature play structure. This was a small scale replica of what the original would be if we chose to purchase the design. The writer felt it was an asset to have a dimensional design rather than a blueprint type of design. It was much easier to evaluate the components and overall design of the play equipment.

The consultant resided outside of the state. In this situation, it was necessary to pay mileage when the consultant visited the site. The project was able to be completed with two consultation visits. The writer and administrative personnel felt the cost was not prohibitive for the service received. A third follow-up consultation was without charge. Many questions and changes were handled through telephone conferences.

Other smaller pieces of equipment, which we planned to build or purchase separately were not included in the consultant's work. This included equipment such as; storage shed, movable objects,playhouse, water, sand, and science areas. The writer developed plans to incorporate these pieces of equipment and areas into the overall playground design.

Evaluated playgound and play structure design. When the play structure design for the infant/toddler and preschool playgrounds were received the writer requested minimal changes. The infant/toddler area needed bucket seat swings rather than a tire swing. They also needed things to crawl through. The preschool area structure needed more components for balancing. All other criteria had been met. The administrative personnel accepted the play structure designs after the recommended changes were made.

The writer developed an overall playground design. This included an infant/toddler play area with provisions for a play structure using elasocrete for cushioning. The play structure adjoins a grassy area where there is an open area for playing and a small hill for various activities. Sand play is in the area of the play structure and grassy area. A wheel toy path goes around and through this area. Shade needed to be provided. A hard surface

area near the building has a water fountain and hand washing facility, with a hose attachment for water activities. A fence or barrier separates the infant/ toddler area from the preschool area.

The major play structure in the preschool area has shredded tires for cushioning. There is a grassy area which included an amphitheater effect. This includes a playhouse, an open area for playing,picnicing and and quiet times. It includes a hill for various activities. The natural science area is zoned together with garden,digging,water, sand, and some old trees laid vertical for climbing. This is close to the woods area. A flat area near the building is used as the construction area. This area has moveable objects, blocks tires, planks,etc. This is located near the storage area. There is a hard surface area adjoining the building with a drinking fountain and handwashing facility, with a hose attachment for water activities. The hard surface area provides an area for painting, games,etc. Hard surface pathways go through the play area to provide paths for wheel toys. Railroad ties surround the major play structure area to keep the cushioning material in place and also provides a surface for balance beam type activities.

The administrative personnel accepted the overall

playground design submitted by the writer as meeting the goals and objectives of the project.

Determined cost. The plan was developed with a total cost of $25,000.00 - $30,000.00 for the complete development of both the infant/toddler and preschool area. Cost breakdown of components indicated this projection was met in all areas except cushioning materials. The writer discovered the elasocrete and shredded rubber cushioning were beyond the cost allowance. A fibrar cushioning system met the safety requirements and was substituted as financially acceptable.

Fundraising. The writer discussed with administrative personnel if funds could be secured through the developmental office of the institution. The response was favorable to fund-raising with several options explored. However, no action was taken on fundraising, and it was later decided that the monies had to come from the child care program budget. This money came from the small profit margin paid by parents in the weekly fees for child care. No special fundraising projects were conducted through the child care program.

Established implementation plan. The writer secured institutional approval to develop a plan which was to be implemented over a period of years; preferably three years. The total cost of $30,000.00 to be divided

over the years with no year to exceed $10,000.00. The writer suggested the order in which the various elements of the playground needed to be completed in the implementation process.

1. Grading and preparation of site
2. Putting in hard surface areas. (includes trike trails and connections for water)
3. Fencing
4. Major play structures;other permanent areas; sand play, playhouse, storage shed, etc.

A time line was established when the construction would begin. The writer encountered the most difficulty not in the implementation of construction, but the process of construction. The process is discussed in step three of this section.

Evaluation of playground design through measurement instrument. The writer asked 25 persons to complete the measurement of results of the practicum by completing the "Playground Improvement Rating Scale." The last part of the scale, supervision and use of play area, was ommitted.because the complete playground was not available for use. The persons evaluating the playground plan were the 20 child development program teachers and five early childhood professionals who were not related to the program. The writer changed the measurement plan and decided not

to have the administrative personnel who were involved in the plan to complete the rating scale. The results were evaluated to consider the success of the playground plan in meeting the goals and objectives that were projected in this practicum. The total number of responses for all the areas evaluated was 965. There were 921 responses (95%) which indicated the playground meets the goal very well.

Step 3 - Difficulties Encountered

A basic difficulty throughout this practicum was the time element. Institutional personnel often found it necessary to cancel meetings, etc. Soon after the implementation of the practicum, an administrative officer, who had the final decision-making power, went on leave for six weeks. This halted all progress as no arrangements were made for decision-making relating to the playground in his absence.

Another problem centered around the implementation process in the construction phase of the playground. This centered around an institutional area rather than any process in the planning stages. This problem centered around how the process of decision-making relating to allocation of money, related processes, and resources are made. Administrative personnel the writer worked with had the power to change decisions which had been made previously. This did not cause the project to fail but did cause roadblocks to work around.

An example of this action: Administrative personnel decided the first thing that would be done in the playground development was to install the major play structures. They decided they would do no site preparation, the site would not be leveled but used as it was. This was in contradiction to the manufacturer and consultant's recommendation. Students of the institution working in the grounds department installed the major structures. Inadequate experience in playground installation resulted in some equipment flaws. For example, a slide faces into the afternoon sun; the structure is installed too low to the ground which did not leave sufficient room for cushioning, resulting in play value on some of the lower levels of the structure and swings is lost.

Another problem developed when administrative personnel discovered a strip of land was morgaged. This area went through the location that was planned as the site for for the infant/toddler play structure. It was the only truly flat area available, so adjustments had to be made in location of the structure.

The major problem that remains to be addressed is the cushioning material placed under the major structures. A fibrar system was chosen, however, when the top layer of material was delivered, administrative personnel had changed the decision and used a less expensive layer of

wood shavings for the cushioning. The cushioning consisted of a rock layer, followed by a thin carpet type layer (for a weed barrier), and the layer of wood shavings. The wood shavings clung to clothing, blew in eyes, gave the children splinters, and rapidly blew and erroded away. and were generally unacceptable. With no wood chips on the carpet layer, the carpet became uneven, causing falls and resulting in a definite safety hazard. The cushioning is in the process of being reworked.

The writer believes proper foundation work is essential in all aspects of playground development. This initial process is generally costly in time and money, but must be adhered to for a quality and long lasting play environment. Proper installation of equipment, cushioning, etc., are all very important elements of the process. Dollars are well spent to contract the installation to someone experienced. The writer believes in this situation if the mistakes with equipment installation had been incurred with a contractor, the institution would have demanded a correction. While in this situation with institutional employees, the attitude is you will have to accept it the way it is, as little will be done to correct the errors.

The writer is adamant about quality and the philosophy "that you get what you pay for." In this

respect, the writer is disappointed in the implementation process,as the writer thinks the plan for the playground is excellent. It is disappointing to know that when the design is finished, construction is delegated to another department which does not have a reputation for excellence of quality. Areas have been changed which results in not demonstrating the best practices in early childhood education.

To summarize, the writer studied the uniqueness of the setting, defined the problem and designed plans to meet this need. The writer developed a developmentally oriented playground design that works for this setting. The results are an enriched learning environment.

CHAPTER V

RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Results

The writer believes the playground design meets the behavior expected for the projected goals of the practicum.

Measurement was achieved using the "Playground Improvement Rating Scale." The playground was rated on five areas. They are (1) activities and equipment; (2) safety and health; (3) organization of play area; (4) variety of play surface; and (5) surrounding environment. Each area was rated by twenty five persons, twenty were teachers in the child development program and five were early childhood professionals not related to the program. Each area had to receive a 90% response that the area meets the goal very well.

A total of 38 questions were used in evaluating the playground. Each item was evaluated on this basis:

3 - outdoor play meets this goal very well

2 - outdoor play area needs to be improved to meet this goal

1 - little or no evidence that outdoor play area meets this goal

The questions and responses are listed.

Area I - Activities and Equipment

Range of activities (8 questions)

1. The equipment provides appropriate and stimulating levels of difficulty for all the age groups served. (infants, toddlers, preschool children)

   Number 3 - 25 responses

2. A variety of equipment is provided to stimulate different types of physical activity. (balls, balance beams, wheel toys, swings, climbing equipment, jump ropes, ladders, planks)

   Number 3 - 25 responses

3. Some of the equipment and materials invite cooperative play. (outdoor blocks, rocking boat, dramatic play props)

   Number 3 - 25 responses

4. Creative materials are readily available for children. (clay, carpentry, paints, water, and sand)

   Number 3 - 25 responses

5. Some of the equipment is flexible so that it can be combined in different ways by the children with adult help if necessary. (planks, climbing boxes, ladders)

   Number 3 - 25 responses

6. The climbing equipment incorporates a variety of spatial relationships. (through tunnels, up or down ramps,over or under platforms)

   Number 3 - 25 responses

7. There is a suitable place for gardening. (window box, tubs with soil, garden plot)

   Number 3 - 25 responses

8. There are enough options for the children to choose from without unreasonable competition or waiting.

   Number 3 - 25 responses

There was a total of 200 responses to area I.

The number 3 response, the playground meets the goal very well, received 200 responses (100%). The criteria of 90% was exceeded by 10%.

Area II - Safety and Health

(8 questions)

9. The equipment is substantially constructed. (anchored climbing structures and swing frames)

   Number 3 - 25 responses

10. Cushioning is provided under swings and climbing. (loose sand or tanbark at least 1 foot deep within a containing edgeboard, rubber padding)

    Number 3 - 15 responses
    Number 2 - 10 responses

11. Swing seats are made of pilable material.

    Number 3 - 25 responses

12. Swings are separated from areas where children run or ride wheel toys.

    Number 3 - 25 responses

13. Protective railings prevent children from falling from high equipment.

    Number 3 - 25 responses

14. Equipment is well maintained. (no protruding nails, splinters, flaking paint, broken parts, frayed rope)

    Number 3 - 20 responses
    No response - 5; indicated they had no way to evaluate

15. The play area is routinely checked and maintained. (trash picked up, grass mowed, good drainage)

    Number 3 - 17 responses
    Number 2 - 3 responses
    No response - 5; indicated they had no way to evaluate

16. The health hazards fron animal contamination are minimized. (sand box covers, fences, children wash hands after playing outdoors)

Number 3 - 25 responses

Question number 10 relating to cushioning material under equipment, the 10 responses indicating improvement was needed to meet the goal were from teachers in the program who cited there is cushioning but the area is not properly cushioned and needs improvement.

Questions 14 1nd 15 relating to maintenance of playground and routine checking of maintenance, the five persons outside of the program did not answer and indicated they had no knowledge of the situation on which to base a response. Three teachers in the program indicated they did not believe the playground was routinely checked for maintenance needs.

There was a total of 190 responses. Number 3 - the playground meets the goal very well received 177 responses (93%). The criteria of 90% was exceeded by 3%.

Area III - Organization of Play Area (16 Questions)

17. The play area is well defined. (fence that cannot be climbed)

Number 3 - 25 responses

18. There are clear pathways and enough space between areas so that traffic flows well and equipment does not obstruct the movement of children.

Number 3 - 24 responses
Number 2 - 1 response

19. Space and equipment are organized so that children are readily visible and easily supervised by teachers.

    Number 3 - 21 responses
    Number 2 - 4 responses

20. Different types of activity areas are separated. (tricycle paths are separate from swings, sand box separate from climbing area)

    Number 3 - 25 responses

21. Some space is available for active play.

    Number 3 - 25 responses

22. Some space encourages quiet, thoughtful play. (grassy area near trees, sandbox away from traffic)

    Number 3 - 25 responses

23. Blocks and props can be set up outdoors for dramatic play.

    Number 3 - 25 responses

24. Art activities can be set up outdoors.

    Number 3 - 25 responses

25. The area is readily accessible to the restrooms.

    Number 3 - 25 responses

26. The area is easily accessible from the classroom.

    Number 3 - 25 responses

27. A drinking fountain is available.

    Number 3 - 25 responses

28. Accessible and sufficient storage is provided.

    Number 3 - 22 responses
    Number 2 - 3 responses

29. A portion of the play area can be used in wet weather.

    Number 3 - 25 responses

30. An adequate area in sunny in cold weather.

    Number 3 - 25 responses

31. An adequate area of shade is provided in hot weather.

    Number 3 - 12 responses
    Number 2 - 13 responses

Question number 19 relating to ease of supervision, four persons indicated the playground was going to be too large and too much space for teachers to supervise.

Question 28 regarding adequate storage area, three persons indicated another storage area was needed in the science and garden area.

Question 31 relating to amount of shade, thirteen persons indicated provision was made for shade through trees, plantings, etc., but the playground would be improved if more shade was provided. One suggested providing shade in every active area.

There was a total of 400 responses. Number 3 - the playground meets the goal well received 380 responses (95%). The criteria of 90% was exceeded by 5%.

Area IV - Variety of Play Surfaces (4 questions)

32. A hard surface is available to ride wheel toys, play group games,or dance.

    Number 3 - 25 responses

33. Soil, sand, and water are available for digging and mud play.

    Number 3 - 25 responses

34. A grassy or carpeted area is provided.

    Number 3- 25 responses

35. Good drainage keeps all surfaces usable.

    Number 3 - 12 responses
    Number 2 - 13 responses

Question 35 relating to drainage, thirteen teachers in the program indicated there was presently in the construction area a place where an underground line was placed and covered. The dirt had settled and formed a low "V" type of area. Since this is low the water collects here. Dirt needs to be filled in this area to have good drainage throughout the playground.

There was a total of 100 responses. Number 3 - the playground meets the goal very well received 89 responses (89%). The criteria of 90% was minus 1%.

Area V - Surrounding Environment (3 questions)

36. The fence creates an effective screen for the playground by blocking out unpleasant or by admitting pleasant aspects of the surrounding environment. It protects children from intrusion by passers-by.

    Number 3 - 25 responses

37. The setting visible from the play area is pleasant.

    Number 3 - 25 responses

38. The location is relatively quiet. (little noise from railroads, traffic, factories)

    Number 3 - 25 responses

There was a total of 75 responses. Number 3 - the playground meets the goal very well received 75 responses (100%). The criteria of 90% was exceeded by 10%.

The overall results were:

1. Activities and equipment - 100%
2. Safety and health - 100%
3. Organization of play area- 95%
4. Variety of play surface - 89%
5. Surrounding environment - 100%

Overall rating 95%

The total number of responses for all areas was 965. Number 3 - the playground meets the goal very well received 921 responses (95%). The criteria of 90% was exceeded by 5%.

The writer secured administrative approval to continue implementation of the playground. An amount of $10,000.00 was included in the current year budget for this project. However, spending the money is not permitted until the end of the budget year, and then it remains continguent on the approval of the Vice-President of Business.

Conclusions

The objectives were met within the established guidelines as evidenced by the data presented in the previous section.

Objective one enabling the integration of the outdoor play area into the total plan was met by thinking of the outdoor space just like the indoor classroom. The outdoor play area has various interest areas or play zones with different primary functions. The teacher can plan activities and experiences to enrich each interest area.

Play areas include active play, sand and water, riding toys, dramatic play, science and nature, art, construction and quiet. An active play area includes the major play structure for climbing, swinging, sliding, etc. There are sand and water areas where sand and water are available for play along with various types of toys to enrich the area. The riding toy area includes riding toys and riding paths around the playground. There is a storage house for the riding toys as well as other portable equipment. The dramatic play area contains a small playhouse which inspires dramatic play. A variety of props can be brought to the area to aid the children's imaginative play. A science and nature area has a garden for planting and growing, a digging spot, feeders to attract birds, and space to conduct other nature and science activities. An area for art and construction activities is available where materials can be set up outdoors and even stored outdoors. The quiet area is

a place for relaxing, enjoying books and stories or just looking at the clouds. It is planned to create a balance in a playground where busy, active play predominates.

The outdoor play space enables many objectives of the preschool curriculum to be achieved. The development of physical, social, and intellectual growth and the enhancement of imagination and creativity all take place when a child's active play is encouraged and redirected.

Objective two invites children to participate in spontaneous play with many choices of activities. This objective blends with the previously mentioned activity areas. It is planned that teachers will develop a weekly group outdoor lesson plan to enrich outdoor learning experiences. The lesson plan is not meant to overstructure children, but to help the teacher provide a variety of activities for the children to choose from and increase the number of optional activity choices.

The equipment and accessories in the playground are age-appropriate for the children's development. There are choices in the play environment which has stages of complexity to challenge children's physical and mental development. Children have the freedom to spontaneously choose the type and complexity of activity they desire.

Objective three provides children the opportunity for creativity. Swings, slides, and climbing structures allow children to experiment and experience different kinds of motion. Wagons become ambulances and trikes line up for car washes, play structures often become towers and forts, and tunnels are secret hideaways. Art activities take a new twist when done on a concrete wall or cement sidewalk or an outdoor easel. Simple props, like tires, inspire play themes and promote peer interaction. Building structures with blocks in the construction area or digging in the dirt promote creative thinking and problem solving. While sand play offers many possibilities for imaginative and creative play, the garden helps children learn about growth, water and plant life. Spontaneous play and props on the playground inspire these types of creative experiences.

Objective four provides stimulation for children to explore and expand their experiences. Playing outdoors offers children many opportunities to explore on their own, and learn more about their world. Exploring the environment is natural for young children. They experience touch, taste, and smell in their environment. The nature and science area provides wonderful phenomena to teach the why's and how's about

things that occur in the natural world. Children discover flowers, birds, and creatures that make their homes in nature. The garden helps them learn firsthand about growth, water, and plant care. Weather activities about sun, shade, shadows, rain, snow, and other conditions take place on the playground. This interaction with nature builds an appreciation and understanding of the beauty of outdoor life. Children see the outdoor world as a comfotable place to eat, paint, play, read, and engage in many types of activities.

Objective five involves contributing to the child's total development. The playground design helps children develop physically, socially, creativity, and cognitively.

The playground offers children a place to use their large and small muscles to move in a variety of ways from jumping, running, and climbing to rolling, twirling, and throwing. Through these activities they are strengthening control over their bodies and developing important balance and coordination skills.

Social skills are developed as children cooperate and compromise to build a sand structure, take turns on a slide, or negotiate for a trike. The playground provides children with opportunities to initiate friendships, join in groups, and develop their own social types.

Problem-solving skills emerge as children work together to turn climbers into caves or build lakes and bridges in sandboxes. In practical ways, they are challenged to use problem-solving as they figure out how to move large props such as tires, boxes, or other objects from one area of the playground to another.

Playground structures and toys offer many possibilities for dramatic play. Fine motor skills are developed and fine-tuned as children paint, draw, or work with materials and tools in the construction area. Creativity is encouraged through exploration and interaction with the environment. Self-esteem and independence are enhanced through acknowledgement of accomplishment of an activity. Opportunities for simple as well as more complex play is included in this playground.

The literature supports children's developmental needs as being the primary focus in planning play environments for young children. In the past, developmental needs were addressed in the classroom, today the developmental emphasis is planned into outdoor play through creative playgrounds which become extensions of the indoor learning environment.

Frost (1985) states the ideal site for a playground is adjacent to children's classrooms. This allows for direct access without crossing streets or parking lots. In this setting, teachers can integrate indoor/outdoor curricula by moving materials in and out of classrooms. The site would be large enough to accommodate all forms of play: social, exercise, dramatic, construction, organized games, and to provide ample space for movement between and within areas. Frost (1978) further states that playgrounds are not utilized because they are developmentally inappropriate. They do not provide graduated levels of challenge, and once the equipment is mastered the child's interest in it diminishes rapidly.

Beckwith (1979) discusses play structures, generally built of wood, with decks of varying levels, which promote climbing and balancing, foster imaginative play as well as group interaction. These structures are designed to offer play with varying degrees of difficulty so that children can choose the challenge they are most comfortable with and can progress at their own rate. Aronson (1988) advocates color, texture, size, placement, design of structure and background affect the safety and effectiveness of a playground as a learning environment.

Thompkins (1981) reflects that the widely accepted view that play is a valid educational process has transformed our ideas about playground design. Segall (1987) states that many of the global objectives of a preschool curriculum can be achieved on the playground. Frost and Wortham (1988) further expand that playgrounds should allow outdoor exploration of indoor curriculum areas and most curriculum areas are readily amenable to this concept.

Guddimi (1987) points out that all children do not play the same way nor do all children have time to play. The opportunity to play has lessened in preschool and early childhood years due to many factors,but children still need opportunities to engage in all types of play. The safe and developmentally sound outdoor play environment is an excellent resource for play opportunities. Literature documents there is increasing evidence to substantiate the fact that play is integral to childrsn's development.

Frost and Wortham (1988) indicate that the playgrounds of the future must include adults who understand the dynamic potential of play in children's development and know how to observe, how to intervene, and how to determine which is needed. Miller (1988) says it is

when adults value the potential of play experiences and see their importance that adults add richness and imagination to the play of children.

The implication of the literature is evidence of the validity of the objectives set forth in this practicum. The results were comparable to what other writer's advocated in the area of children's play and playground development.

The writer believes the results achieved in the playground design are in harmony with the theory and practice advocated in current literature. The current literature and the results of this practicum both embrace the philosophy of meeting broad objectives in children's development in planning outdoor play spaces. Evidence concurs with the value of providing an environment which invites children to participate in spontaneous play with many choices of activities allowing opportunities for creativity and stimulation to explore and expand their experiences. Educators agree that the development of motor skills is an important goal in outdoor play. However, outdoor play contributes to a child's development of cognition, socialization, affect, language, and creativity, while also enhancing a child's sense of independence and self-image.

The writer discovered the outdoor play environment can be integrated with the curriculum objectives of the indoor classroom and contributes much to a child's total developmental process when the outdoor play environment is planned as an integral component of the total learning environment.

Recommendations

The writer has three recommendations based on the results of the practicum. First, agree upon goals for children's learning. Consider the broad objectives of children's development to integrate indoor and outdoor curricula into a total plan. Second, plan ahead to design and equip creative playgrounds. This is necessary to achieve maximum play value for children. Playgrounds can also add considerably to the size of the program budget. Third, evaluate the strengths and weaknesses of each play area. Giving staff, parents, and administrators the opportunity to rate the playground will help create understanding and clearer perspective of how well the program's goals for children are being met in the playground.

It is important to understand that neither an attractive nor innovative design will ensure that a

playground will play a key role in meeting the educational objectives for outdoor play. This process involves much planning, researching, time and energy. The educational perspective takes education out of the classroom to include the active learning experiences which children can encounter in the outdoors.

The writer has plans for furthering the practicum solution in the work setting to include: continued implementation of the playground design to complete the playground project and training for the staff to aid in understanding how to achieve maximum play value from a developmentally oriented playground.

Dissemination

The results of the writer's practicum project were shared through workshops and publication. Workshops were presented to: (1) Blue River- Kansas City Baptist Association,the directors of day care, preschool and parent day out programs; and (2) Oklahoma Baptist Convention Church Weekday Education conference, the directors and teachers in church weekday programs. The Church Administration magazine published by the Convention Press of the Southern Baptist Convention has asked the writer to produce an article on playground development to be published in the Church Weekday Education section of the magazine.

The writer participated in conducting and gathering playground data for the research in the "National Survey of Early Childhood Playgrounds" conducted by Sue Wortham and Joe Frost at the NAEYC conference in November, 1988.

The writer plans to continue the dissemination of practicum results through workshop presentations, related areas and networking with other early childhood professionals.

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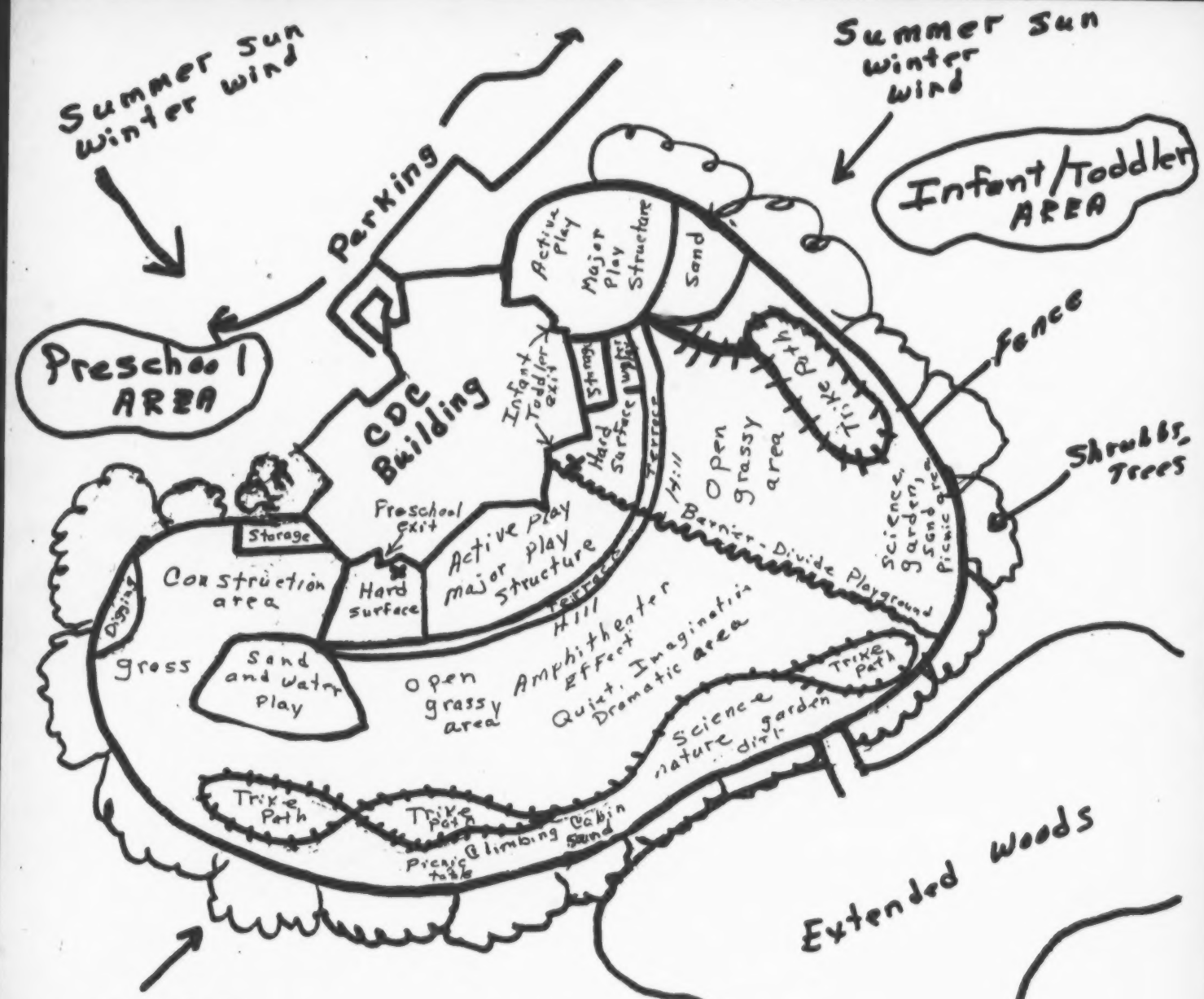
APPENDIX A

PLAYGROUND DESIGN



AREAS

1. Construction
2. Active play
3. Dramatic
4. Science
5. Sand/water
6. Wheel toys
7. Quiet
8. Grassy
9. Hill
10. Hard surface

×Hard surface area

Drinking fountain
Wash-up place
Easel

Conceptual Playground Plan

Child Development Center

North ↑ scale 1" = 40

APPENDIX B

NEEDS ASSESSMENT QUESTIONNAIRE WITH DATA

OUTDOOR PLAY AREA QUESTIONNAIRE
Data Received
Part I

Please indicate your opinion to the questions asked on the Outdoor Play Area Questionnaire by circling the number beside each statement to indicate whether you (5) strongly agree; (4) somewhat agree; (3) no opinion; (2) somewhat disagree; or (1) strongly disagree.

Please put any additional comments you may have on the back of this questionnaire. Thank you for your time in assisting me with this study.

	Strongly Agree	Somewhat Agree	No Opinion	Somewhat Disagree	Strongly Disagree
1. There is no developmentally appropriate outdoor playground for children in the Child Development Center program.	13 (65%)	5 (25%)	1 (5%)	1 (5%)	0
2. There is no outdoor play equipment near the Child Development Center building.	14 (70%)	1 (5%)	4 (20%)	0	1 (5%)
3. The outdoor play equipment which is available in another location is lacking in proper safety considerations and maintence.	13 (65%)	5 (25%)	1 (5%)	1 (5%)	0
4. There is limited outdoor play opportunity because of the lack of an appropriate playground.	14 (70%)	6 (30%)	0	0	0
5. There is no extension of the indoor curriculum to the outdoor learning environment.	10 (50%)	5 (25%)	1 (5%)	3 (15%)	1 (5%)
6. The development of a playground adjoining the Child Development Center building would improve the overall physical facility and contribute to the quality of the total program.	20 (100%)	0	0	0	0

The number of responses to each statement was twenty (20).

Part II

Data Received

Please indicate your opinoin to the questions by circling the number beside each statement to indicate whether: 3 - current outdoor play area meets this goal very well
2 - current outdoor play area needs to be improved to meet this goal
1 - little or no evidence that current outdoor play area meets this goal

Please put any additional comments on the back of the questionnaire.

	Meets Goal	Needs Improving to Meet Goal	No Evidence of Meeting Goal
1. The equipment provides appropriate and stimulating levels of difficulty for all age groups served. (Infants to preschool aged children)	0	7 (39%)	11 (61%)
2. A variety of equipment is provided to stimulate different types of physical activity. (Balls, balance beams, wheel toys, swings, climbing equipment, jump ropes, ladders, planks)	0	9 (50%)	9 (50%)
3. Some of the equipment and materials invite cooperative play. (Outdoor blocks, rocking boat, dramatic play props)	0	8 (44%)	10 (56%)
4. Creative materials are readily available for children. (clay, carpentry, paints, water, and sand)	1 (5%)	5 (28%)	12 (67%)
5. The climbing equipment incorporates a variety of spatial relationships. (though tunnels, up or down ramps, over or under platforms)	1 (1%)	3 (16%)	13 (73%)
6. There are enough options for the children to choose from without unreasonable competition or waiting.	0	9 (50%)	9 (50%)
7. Cushioning is provided under swings and climbing apparatus.(loose sand or tanbark at least 1 foot deep within a containing edge-board, rubber padding)	1 (5%)	5 (28%)	12 (67%)

The number of responses to each statement was eighteen (18).

	Meets Goal	Needs Improving to Meet Goal	No Evidence of Meeting Goal
8. Equipment is well maintained.(no protuding nails, splinters, flaking paint, broken parts, frayed ropes)	1 (5%)	4 (22%)	13 (73%)
9. The play area is routinely checked and maintained. (trash picked up, grass mowed, good drainage)	3 (17%)	8 (44%)	7 (39%)
10. A drinking fountain is available on the playground.	0	0	18 (100%)
11. An adequate area of shade is provided in hot weather.	0	2 (11%)	16 (89%)
12. A hard surface is available to ride wheel toys, play group games, or dance.	0	0	18 (100%)
13. Soil, sand, and water are available for digging and mud play.	2 (11%)	4 (22%)	12 (67%)
14. Most of the children are constructively involved with the equipment and activities in the playground.	2 (11%)	10 (56%)	6 (33%)

Playground Improvement Rating Scale

Program _____

Number of children _____ Date _____

Ages of children _____ Rater _____

Number of staff _____

Score each item: 3—outdoor play area meets this goal very well
2—outdoor play area needs to be improved to meet this goal
1—little or no evidence that outdoor play area meets this goal

(*Examples* of items to look for are listed in parentheses.)

Activities and equipment

Range of activities

_____ 1. The equipment provides appropriate and stimulating levels of difficulty for all the age groups served. (infants, toddlers, preschool children, school-age children)

_____ 2. A variety of equipment is provided to stimulate different types of physical activity. (balls, balance beams, wheel toys, swings, climbing equipment, jump ropes, ladders, planks)

_____ 3. Some of the equipment and materials invite cooperative play. (outdoor blocks, rocking boat, dramatic play props)

_____ 4. Creative materials are readily available for children. (clay, carpentry, paints, water, and sand)

_____ 5. Some of the equipment is flexible so that it can be combined in different ways by the children with adult help if necessary. (planks, climbing boxes, ladders)

_____ 6. The climbing equipment incorporates a variety of spatial relationships. (through tunnels, up or down ramps, over or under platforms)

_____ 7. There is a suitable place for gardening. (window box, tubs with soil, garden plot)

_____ 8. There are enough options for the children to choose from without unreasonable competition or waiting.

Safety and health

_____ 9. The equipment is substantially constructed. (anchored climbing structures and swing frames)

_____ 10. Cushioning is provided under swings and climbing apparatus. (loose sand or tanbark at least 1 foot deep within a containing edgeboard, rubber padding)

_____ 11. Swing seats are made of pliable material.

_____ 12. Swings are separated from areas where children run or ride wheel toys.

_____ 13. Protective railings prevent children from falling from high equipment.

_____ 14. Equipment is well maintained. (no protruding nails, splinters, flaking paint, broken parts, frayed ropes)

_____ 15. The play area is routinely checked and maintained. (trash picked up, grass mowed, good drainage)

_____ 16. The health hazards from animal contamination are minimized. (sand box covers, fences, children wash hands after playing outdoors)

Organization of play area

_____ 17. The play area is well defined. (fence that cannot be climbed)

_____ 18. There are clear pathways and enough space between areas so that traffic flows well and equipment does not obstruct the movement of children.

_____19. Space and equipment are organized so that children are readily visible and easily supervised by teachers.
_____20. Different types of activity areas are separated. (tricycle paths separate from swings, sand box separate from climbing area)
_____21. Open space is available for active play.
_____22. Some space encourages quiet, thoughtful play. (grassy area near trees, sandbox away from traffic)
_____23. Blocks and props can be set up outdoors for dramatic play.
_____24. Art activities can be set up outdoors.
_____25. The area is easily accessible from the classroom.
_____26. The area is readily accessible to the restrooms.
_____27. A drinking fountain is available.
_____28. Accessible and sufficient storage is provided.
_____29. A portion of the play area is covered for use in wet weather.
_____30. An adequate area is sunny in cold weather.
_____31. An adequate area of shade is provided in hot weather.

Variety of play surfaces

_____32. A hard surface is available to ride wheel toys, play group games, or dance.
_____33. Soil, sand, and water are available for digging and mud play.
_____34. A grassy or carpeted area is provided.
_____35. Good drainage keeps all surfaces usable.

Surrounding environment

_____36. The fence creates an effective screen for the playground by blocking out unpleasant or by admitting pleasant aspects of the surrounding environment. It protects children from intrusion by passers-by.
_____37. The setting visible from the play area is pleasant.
_____38. The location is relatively quiet. (little noise from railroads, traffic, factories)

Supervision and use of play area

_____39. A sufficient number of adults supervise the children during outdoor play.
_____40. Responsibility for specific areas is assigned to staff to assure that the entire playground is well supervised.
_____41. Teachers focus their attention on and interact with the children to enhance learning and maintain safety. (adults do not talk together at length or sit passively when supervising children)
_____42. Children are guided to use the equipment appropriately. (climb on ladders instead of tables)
_____43. The daily schedule includes morning and afternoon active play periods for all age groups, either outdoors or in suitably equipped indoor areas.
_____44. The schedule for use of the play area minimizes overlap of age groups to avoid conflicts, overcrowding, and undue competition for materials.
_____45. Special activities are planned for and set up in the outdoor area daily. (games, painting)
_____46. Teachers add to or rearrange large equipment at least every six months. (spools, crates, tunnels)
_____47. Teachers encourage and assist children in rearranging small flexible equipment. (ladders, planks, boxes)
_____48. Most of the children are constructively involved with the equipment and activities in the playground.
_____49. Children help clean up the area and put away equipment.

_____**Total score**

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APPENDIX D

PERMISSION TO INCLUDE
"PLAYGROUND IMPROVEMENT RATING SCALE
SO

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Publications Director

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